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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,991	02/13/2002	Lloyd Watts	ANSCP006	6884

22830 7590 02/23/2007
CARR & FERRELL LLP
2200 GENG ROAD
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EXAMINER

SELLERS, DANIEL R

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/074,991

Applicant(s)

WATTS, LLOYD

Examiner

Daniel R. Sellers

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 6, 20 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel in view of Nakatani et al. (hereinafter Engel and Nakatani respectively).

3. Regarding **claim 6**, Engel teaches a method of analyzing an input signal into a plurality of frequency components (Fig. 1-4 and Col. 3, lines 5-17) comprising:

processing the input signal with a first low pass filter to produce a first low pass filtered signal (Fig. 1, items 1, 11, and 12-1); and

processing the input signal with a second low pass filter to produce a second low pass filtered signal (Fig. 1, items 1, 11, and 12-2).

Engel does not specifically teach low pass filters, however Engel teaches filters that cover an entire range of frequencies that make up the input signal (Col. 5, lines 3-10). Engel also does not teach a subtraction process to derive the first and second outputs.

Nakatani teaches a linear phase high pass filter (Col. 3, lines 56-58). This filter subtracts the first low pass filtered signal from the input signal to derive a first frequency component (Col. 4, lines 7-36).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Engel's filter bank and Nakatani's high pass filter for the purpose of utilizing a linear phase filter design. One of ordinary skill in the art at the time of the invention would be motivated to select a linear phase design to avoid non-linear frequency delays in the output. The second frequency component would be derived in the same manner as the first component (e.g. Engel's filter (12-2) would be realized with Nakatani's filter (Fig. 5)).

4. Regarding **claim 20**, see the preceding argument with respect to claim 6. The combination of Engel and Nakatani teaches these features. Specifically, Engel teaches different filters with different passbands (Col. 3, lines 5-17 and Col. 5, lines 17-19), wherein Nakatani teaches the low pass and subtraction process to realize the passbands with linear phase filters. Therefore, the combination teaches individual filters for each band, and first and second processors with these claimed subtraction features.

5. Regarding **claim 21**, see the preceding argument with respect to claim 6. The combination teaches these features.

Response to Arguments

6. Applicant's arguments with respect to claim 6, 20, and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lovett, USPN 6,434,417 B1 teaches creating bandpass filters using low pass filters and subtraction (Col. 7, lines 4-10) (previously introduced).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 571-272-7528. The examiner can normally be reached on Monday to Friday, 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRS


SINH TRAN
SUPERVISORY PATENT EXAMINER